

### Application

Gate valves are isolating valves designed for full closing or opening of working media flow. If the gate valves are used for regulating or throttling purposes, the manufacturer does not guarantee tightness of the gate valves. For regulation we recommend to use special control gate valve type S33.C.

### Working medium

- water
- non-corrosive liquids
- steam
- air
- gases of group 1 and 2
- petroleum and petroleum products

The service fluids shall not contain rough impurities.

### Technical description

The gate valve is an outside-screw-and-yoke, full bore with flexible wedge and rising stem. The body and the bonnet are made of castings and are connected by a flanged joint. The seating surfaces of the seats and the wedge are made in compliance with API 600. The seat rings are welded into the body. The gate valves are equipped with a back seat. The gate valves are a bi-directional sealing valves. The body-bonnet joint and the packing chamber are sealed with asbestos-free gasket and packing which guarantee a long life service. The requirement for an automatic body cavity pressure relief shall be specified in the purchase order. Pressure relief can be achieved by:

- drilling a hole through one disc of the wedge,
- special valve incorporated into the wedge,
- external bypass,
- use of solid wedge.

TA-Luft design on request.

### Connection to the piping

- **flanged ends** - acc. to EN 1092-1 or GOST, face-to-face dimensions are acc. to EN 558, Series 14, 15 and 26 or GOST
- **welded ends** - acc. to EN 12627

### Operation

The gate valves are delivered with a handwheel, a manual bevel gear, an electric actuator or bare stem ready for connection to an actuator. The standard connecting dimensions for connection to a manual gear or an electric actuator meet the requirements of ISO 5210.



### Accessories

The gate valves can be equipped with the following accessories:

- drain valve,
- air-vent valve,
- by-pass valves,
- stand for remote control, including chains and chain wheels,
- vent plugs,
- gland packing „live loading“.

### Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266.
- other tests by agreement.

### Installation

The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

### Production range

Type	PN	DN																									
		40	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	
S33.1 S33.C	16		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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S33.2	6, 10, 16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
S33.3	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
S33.4	2,5													.	.	.	.	.	.	.	.	.	.	.	.	.	
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	25													.	.	.	.	.	.	.	.	.	.	.	.	.	



DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)

Body design: yoke gate valve

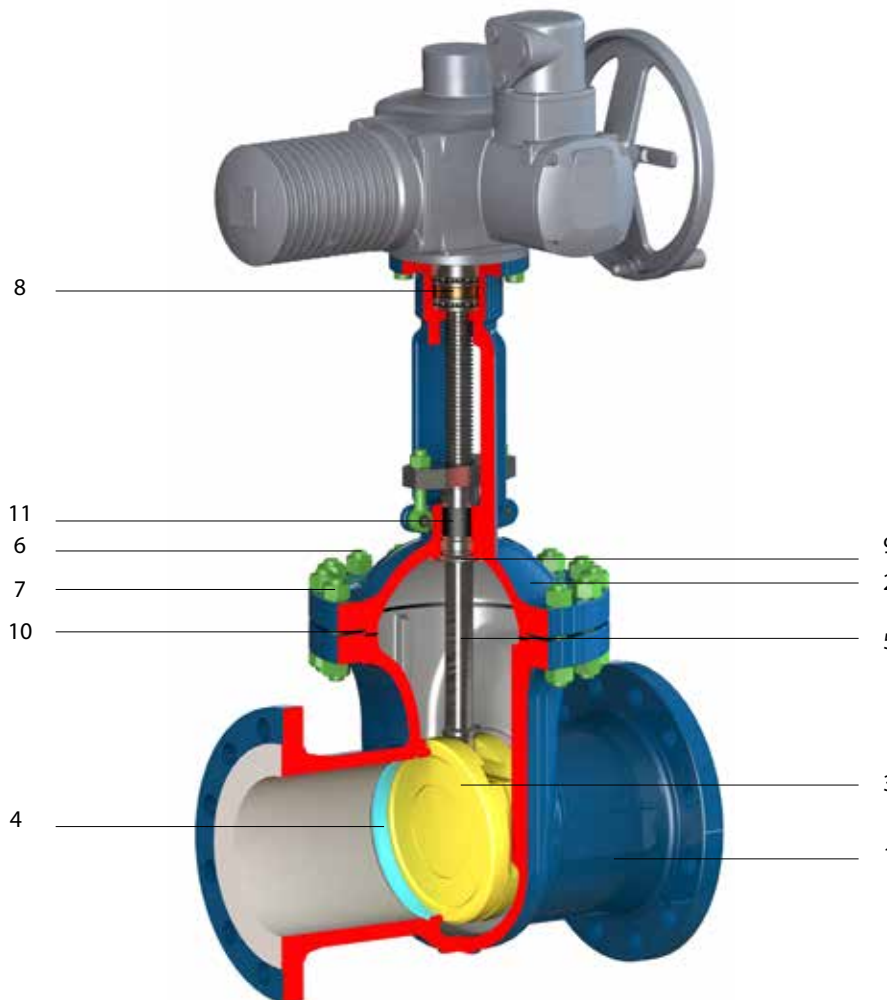
Body, bonnet, wedge: cast

Rising stem

Flexible wedge

Connection:  EN 1092-1 FLANGED ENDS

 EN 12 627 WELDED ENDS



Material acc. to EN

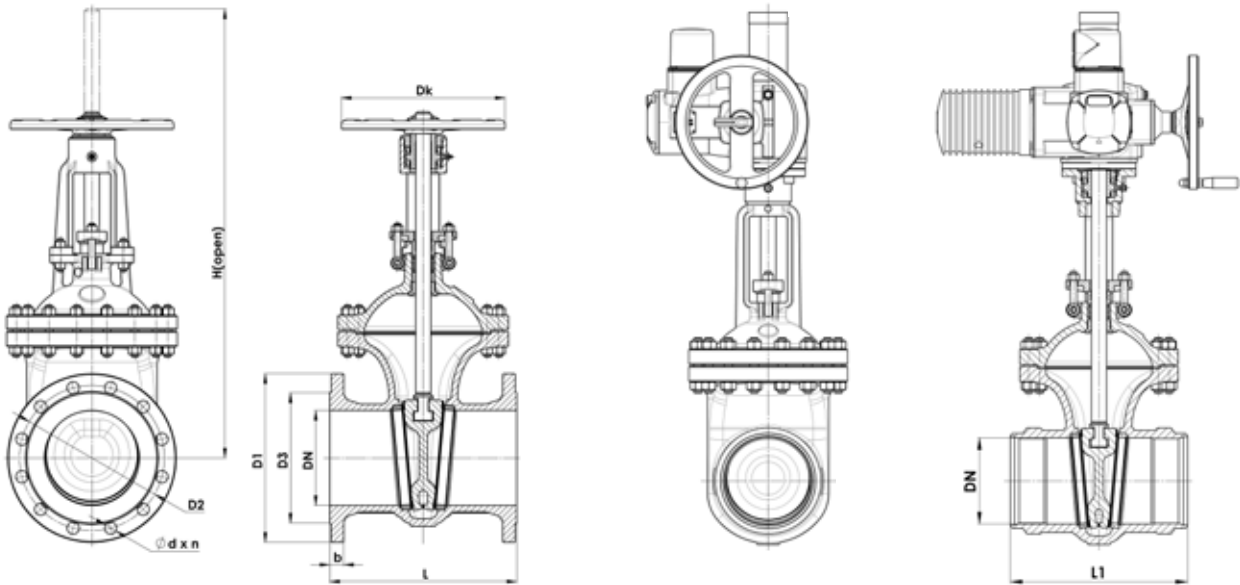
Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body	1.0619	1.7357	1.6220	1.4408
2	Bonnet	1.0619	1.7357	1.6220	1.4408
3	Wedge + overlay	1.0619 + 13Cr	1.7357 + Stellite 6	1.6220 + F304	1.4408
4	Seat + overlay	1.0460 + 13Cr	1.7335 + Stellite 6	1.0566 + Stellite 6	1.4401
5	Stem	1.4021	1.4923	1.4301	1.4401
6	Bonnet bolts*	1.7218*	1.7709*	1.7225*	1.4401*
7	Bonnet nuts*	1.1191*	1.7709*	1.7225*	1.4401*
8	Stem nut	Ni-resist, Al-bronze			
9	Back seat	1.4006 + Hard facing		1.4301 + Hard facing	1.4401 + Hard facing
10	Gasket	Graphite with stainless steel insert			
11	Packing	Pressed graphite			

\* equivalent or according to customer's request



DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)  
 Body design: yoke gate valve

Connection: EN 1092-1 FLANGED ENDS  
 EN 12 627 WELDED ENDS



### PN 16

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	18	18x4	20	216	17
65	185	145	122	270	410	250	18	18x8	30	241	26
80	200	160	138	280	460	250	20	18x8	36	283	34
100	220	180	158	300	550	300	20	18x8	49	305	48
125	250	210	188	325	660	300	22	18x8	66	381	72
150	285	240	212	350	775	300	22	22x8	95	404	100
200	340	295	268	400	960	350	24	22x12	154	419	160
250	405	355	320	450	1175	400	26	26x12	225	457	240
300	460	410	378	500	1360	500	28	26x12	334	502	355
350	520	470	438	550	1525	550	30	26x16	445	762	490
400	580	525	490	600	1675	600	32	30x16	610	838	690
500	715	650	610	700	2050	700	44	33x20	1105	991	1070
600	840	770	725	800	2400	800	54	36x20	1190	1143	1660

### PN 25

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	20	18x4	20	216	17
65	185	145	122	270	410	250	22	18x8	32	241	26
80	200	160	138	280	460	250	24	18x8	39	283	34
100	235	190	162	300	550	300	24	22x8	53	305	48
125	270	220	188	325	660	300	26	26x8	71	381	72
150	300	250	218	350	775	300	28	26x8	101	404	100
200	360	310	278	400	960	350	30	26x12	160	419	160
250	425	370	335	450	1175	400	32	30x12	232	457	240
300	485	430	395	500	1360	500	34	30x16	345	502	355
350	555	490	450	550	1525	550	38	33x16	460	762	490
400	620	550	505	600	1675	600	40	36x16	645	838	690
500	730	660	615	700	2050	700	48	36x20	1166	991	1070
600	845	770	720	800	2450	800	58	39x20	1258	1143	1660



DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)  
Body design: yoke gate valve

Connection:  EN 1092-1 FLANGED ENDS  
 EN 12 627 WELDED ENDS

## PN 40

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	20	18x4	20	216	17
65	185	145	122	290	410	250	22	18x8	28	241	26
80	200	160	138	310	460	250	24	18x8	44	283	34
100	235	190	162	350	560	300	24	22x8	62	305	48
125	270	220	188	400	660	300	26	26x8	87	381	72
150	300	250	218	450	765	350	28	26x8	125	404	100
200	375	320	285	550	955	400	34	30x12	265	419	160
250	450	385	345	650	1185	450	38	33x12	405	457	240
300	515	450	410	750	1380	500	42	33x16	500	502	355
350	580	510	465	850	1510	500	46	36x16	725	762	490
400	660	585	535	950	1690	600	50	39x16	1280	838	690
500	755	670	615	1150	2065	600	52	42x20	1589	991	1070
600	890	795	735	1350	2465	700	60	48x20	1903	1143	1660

## PN 63

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	180	135	102	250	420	280	26	22x4	37	292	28
65	205	160	122	290	470	280	26	22x8	46	330	37
80	215	170	138	310	525	300	28	22x8	49	356	38
100	250	200	162	350	620	350	30	26x8	86	432	75
125	295	240	188	400	715	350	34	30x8	129	508	113
150	345	280	218	450	815	400	36	33x8	150	559	132
200	415	345	285	550	1115	500	42	36x12	360	660	320
250	470	400	345	650	1280	640	46	36x12	570	787	500
300	530	460	410	750	1550	680	52	36x16	815	838	720
350	600	525	465	850	1665	-	56	39x16	1080	889	950
400	670	585	535	950	1820	-	60	42x16	1460	991	1290
500	800	705	615	1150	2235	-	68	48x20	2315	1194	2040
600	930	820	735	1350	2570	-	76	56x20	3480	1397	3060

## PN 100

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	195	145	102	250	420	280	30	26x4	39	292	29
65	220	170	122	290	470	280	34	26x8	50	330	39
80	230	180	138	310	525	300	36	26x8	54	356	40
100	265	210	162	350	620	350	40	30x8	94	432	80
125	315	250	188	400	715	350	40	33x8	138	508	122
150	355	290	218	450	815	400	44	33x12	160	559	141
200	430	360	285	550	1115	500	52	36x12	385	660	340
250	505	430	345	650	1280	640	60	39x12	610	787	540
300	585	500	410	750	1550	680	68	42x16	890	838	780
350	655	560	465	850	1665	-	74	48x16	1190	889	1050
400	715	620	535	950	1820	-	78	48x16	1570	991	1380
500	870	760	615	1150	2235	-	90	56x20	2630	1194	2315
600	940	838	692	1350	2570	-	105	52x24	3870	1397	3405



**Application**

Gate valves are isolating valves designed for full closing or opening of working media flow. If the gate valves are used for regulating or throttling purposes, the manufacturer does not guarantee tightness of the gate valves.

**Working medium**

- water
  - non-corrosive liquids
  - steam
  - air
  - gases of group 1 and 2
  - petroleum and petroleum products
- The service fluids shall not contain rough impurities.

**Technical description**

The gate valve is an outside-screw-and-yoke, full bore with flexible wedge and rising stem. The body and the bonnet are made of castings and are connected by a flanged joint. The seating surfaces of the seats and the wedge are made in compliance with API 600. The seat rings are welded into the body. The gate valves are equipped with a back seat. The gate valves are a bi-directional sealing valves. The body-bonnet joint and the packing chamber are sealed with asbestos-free gasket and packing which guarantee a long life service. The requirement for an automatic body cavity pressure relief shall be specified in the purchase order. Pressure relief can be achieved by:

- drilling a hole through one disc of the wedge,
- special valve incorporated into the wedge,
- external bypass,
- use of solid wedge.

TA-Luft design on request.

**Connection to the piping**

- **flanged ends** - according to ASME B16.5 a B16.47, face-to-face dimensions are according to ASME B16.10
- **welded ends** - according to ASME B16.25

**Operation**

The gate valves are delivered with a handwheel, a manual bevel gear, an electric actuator or bare stem ready for connection to an actuator. The standard connecting dimensions for connection to a manual gear or an electric actuator meet the requirements of ISO 5210.



**Accessories**

The gate valves can be equipped with the following accessories:

- drain valve,
- air-vent valve,
- by-pass valves,
- stand for remote control, including chains and chain wheels,
- vent plugs,
- gland packing „live loading“.

**Testing**

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- operability test according to API 598
- other tests by agreement

**Installation**

The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

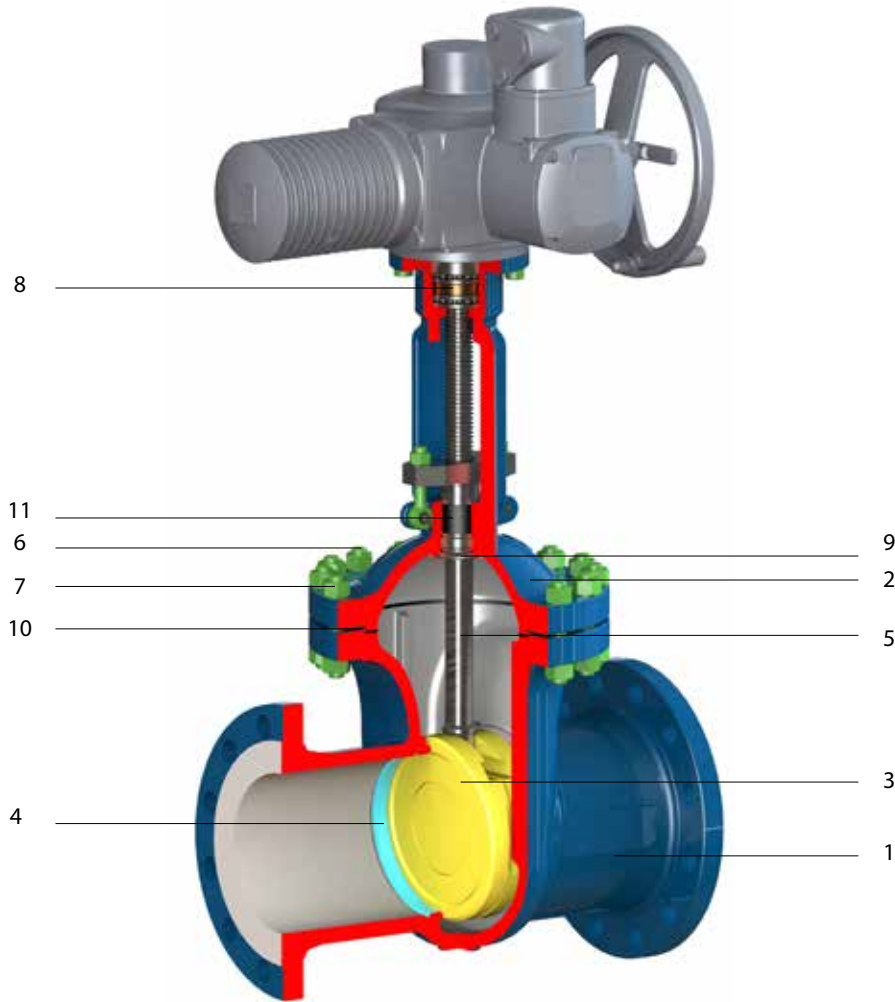
**Production range**

Class	NPS																			
	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	28	30	32	36	42	48	
150	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
300	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)  
 Body design: yoke gate valve  
 Body, bonnet, wedge: cast  
 Rising stem  
 Flexible wedge

Connection: ASME B16.5, ASME B16.47 FLANGED ENDS  
 ASME B16.25 WELDED ENDS



Material acc. to ASTM

Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body	A216 WCB	A217 WC6	A352 LCC	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A352 LCC	A351 CF8M
3	Wedge + overlay **	A216 WCB + 13Cr	A217 WC6 + Stellite 6	A352 LCC + F304	A351 CF8M
4	Seat + overlay **	A105 + 13Cr	A182 F11 + Stellite 6	A350 LF2 + Stellite 6	A182 F316
5	Stem	A182 F6a	A182 F6a	A182 F304	A182 F316
6	Bonnet bolts*	A193 B7*	A193 B16*	A320 L7*	A193 B8*
7	Bonnet nuts*	A 194 2H*	A194 4*	A194 7*	A194 8*
8	Stem nut	A439 D2 (Ni-rezist), Al-bronze			
9	Back seat	A182 F6a		A182 F304	A182 F316
10	Gasket	Graphite with stainless steel insert			
11	Packing	Pressed graphite			

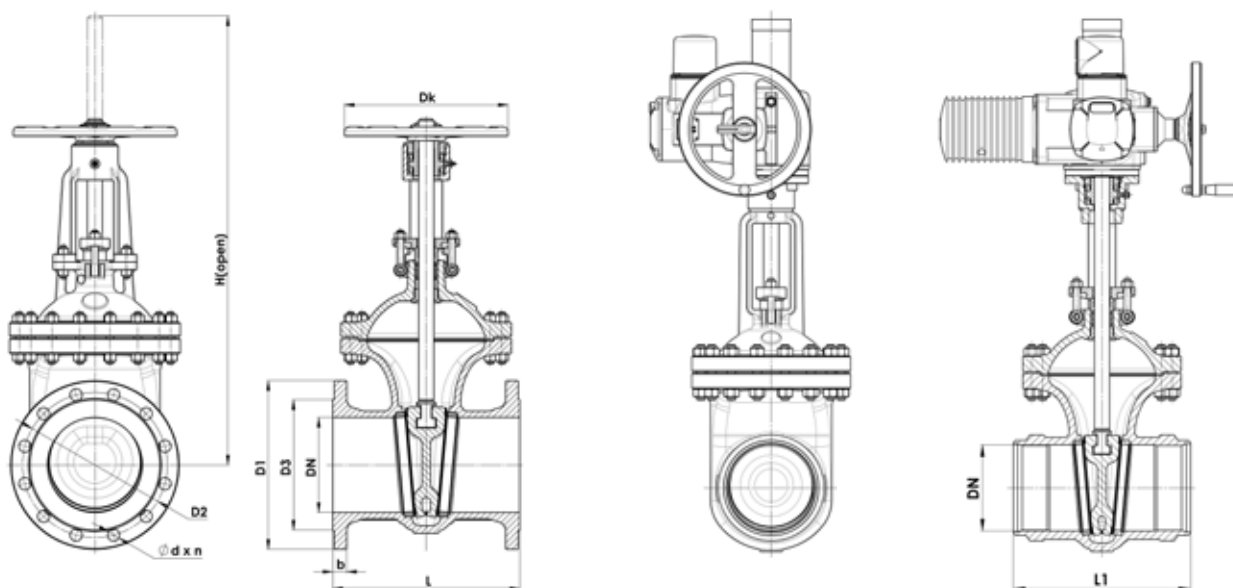
\* equivalent or according to customer's request

\*\* other trims according to API 600



NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)  
 Body design: yoke gate valve

Connection:  ASME B16.5, ASME B16.47 FLANGED ENDS  
 ASME B16.25 WELDED ENDS



## Class 150

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	150	120,7	92,1	19,1x4	178	14,3	397	200	18	216	18
2,5	65	180	139,7	104,3	19,1x4	190	20,7	435	250	26	241	28
3	80	190	152,4	127	19,1x4	203	17,5	497	250	34	283	30
4	100	230	190,5	157,2	19,1x8	229	22,3	585	250	52	305	50
6	150	280	241,3	215,9	22,4x8	267	23,9	765	350	88	403	85
8	200	345	298,5	269,9	22,4x8	292	27	973	350	144	419	128
10	250	405	362	323,8	25,4x12	330	28,6	1160	400	197	457	220
12	300	485	431,8	381	25,4x12	356	30,2	1362	450	298	502	310
14	350	535	473,6	412,8	28,6x12	381	33,4	1520	500	406	572	450
16	400	595	539,8	469,9	28,6x16	406	35	1725	560	524	610	550
18	450	625	577,9	533,4	31,8x16	432	38,1	1930	560	626	660	700
20	500	700	635	584,2	31,8x20	457	41,3	2160	610	789	711	910
24	600	815	749,3	692,2	35x20	508	46,1	2540	610	1033	813	1130
28	700	925	863,6	800	35x28	610	69,9	2990	-	1905	914	1750
30	750	985	914,4	857	35x28	610	73,1	3070	-	2145	914	1960
32	800	1060	977,9	914	41,3x28	711	79,4	3460	-	3506	-	-
36	900	1170	1085,8	1022	41,3x32	711	88,9	3660	-	3575	-	-
42	1000	1345	1257,3	1194	41,3x36	813	88,9	4260	-	5123	-	-
48	1200	1510	1422,4	1356	41,3x44	884	95,3	4875	-	6668	-	-



NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)  
 Body design: yoke gate valve

Connection: ☉ ASME B16.5, ASME B16.47 FLANGED ENDS  
 ☼ ASME B16.25 WELDED ENDS

### Class 300

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	165	127	92,1	19,1x8	216	20,7	422	200	24	216	19
2,5	65	190	149,2	104,3	22,4x8	241	23,9	446	250	31	241	29
3	80	210	168,3	127	22,4x8	282	27	512	250	52	282	38
4	100	244	200	157,2	22,4x8	305	30,2	603	250	76	305	57
6	150	320	269,9	215,9	22,4x12	403	35	804	350	146	403	118
8	200	380	330,2	269,9	25,4x12	419	39,7	1002	400	218	419	183
10	250	445	387,4	323,8	28,6x16	457	46,1	1229	400	352	457	278
12	300	520	450,8	381	31,8x16	502	49,3	1479	460	460	502	406
14	350	585	514,4	412,8	31,8x20	762	54,6	1630	560	857	762	565
16	400	650	571,5	469,9	35x20	838	55,6	1815	460	1172	838	728
18	450	710	628,6	533,4	35x24	914	58,8	2000	460	1281	914	806
20	500	775	685,8	584,2	35x24	991	62	2220	560	1498	991	1231
24	600	915	812,8	692,2	41,3x24	1143	68,3	2620	610	2282	1143	1890
30	750	1090	997	857	47,6x28	1397	73,1	3180	700	4495	1397	3686
36	900	1270	1168,4	1022	54x32	1727	88,9	3760	700	5833	1727	4784

### Class 600

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	165	127	92,1	19,1x8	292	25,4	441	250	46	292	31
2,5	65	190	149,2	104,3	22,4x8	330	28,6	510	300	62	330	57
3	80	210	168,3	127	22,4x8	356	31,8	574	300	72	356	65
4	100	275	215,9	157,2	25,4x8	432	38,1	700	350	128	432	87
6	150	355	292,1	215,9	28,6x12	559	47,7	804	450	216	559	169
8	200	420	349,2	269,9	31,8x12	660	55,6	1055	500	413	660	375
10	250	510	431,8	323,8	35x16	787	63,5	1314	640	754	787	604
12	300	460	489	381	35x20	838	66,7	1460	680	981	838	859
14	350	605	527	412,8	38,1x20	889	69,9	1750	610	1316	889	1154
16	400	685	603,2	469,9	41,3x20	991	76,2	1900	610	1672	991	1530
18	450	745	654	533,4	44,5x20	1092	82,6	2020	640	2780	1092	2282
20	500	815	723,9	584,2	44,5x24	1194	88,9	2172	700	3203	1194	2650
24	600	940	838,2	692,2	50,8x24	1397	101,6	2650	750	4069	1397	3340

### Class 900

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	216	165	92	25 x 8	368	39	500	280	70	368	63
3	80	241	190,5	127	25 x 8	381	39	660	300	140	381	126
4	100	292	235	157	32 x 8	457	45	750	350	200	457	180
6	150	381	317,5	215,9	32 x 12	610	56	1060	500	358	610	322
8	200	470	393,7	270	38 x 12	737	64	1140	650	550	737	495
10	250	546	469,9	324	38 x 16	838	70	1370	700	1000	838	900
12	300	610	533,4	381	38 x 20	965	79,3	1560	900	1215	965	1094
14	350	640	558,8	413	41 x 20	1029	86	1950	900	1600	1029	1440
16	400	705	616	470	44 x 20	1130	89	2100	900	2150	1130	1935

### Class 1500

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	216	165	92	25 x 8	368	39	510	280	70	368	63
3	80	267	203	127	32 x 8	470	48	670	350	175	470	158
4	100	311	241	157	35 x 8	546	54	770	400	270	546	243
6	150	394	317,5	215,9	38 x 12	705	83	1070	500	520	705	468
8	200	483	393,7	270	44 x 12	832	92	1180	750	820	832	738
10	250	584	482,6	324	51 x 12	991	108	1410	900	1560	991	1404
12	300	673	571,5	381	54 x 16	1130	124	1620	-	2730	1130	2457
14	350	750	635	413	60 x 16	1257	135	2020	-	-	1257	-
16	400	825	704,8	470	60 x 16	1384	146	2180	-	-	1384	-